

S.Y.B.SC. SEM – IV (CBCS - 2016 Course) : SUMMER - 2019
SUBJECT: BOTANY: PLANT PHYSIOLOGY

Day: Thursday
Date: 25/04/2019

Time: 11.00 A.M. To 02.00 P.M.
Max. Marks: 60

S-2019-0850

N.B:

- 1) All questions are **COMPULSORY**
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagram **WHEREVER** necessary.
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Q.1 Attempt any **TWO** of the following **(12)**

- a) What is DPD? Explain its importance in water absorption.
- b) Define transpiration. Explain different factors affecting in transpiration.
- c) Give an account of role and deficiency symptoms of nitrogen and phosphorus.

Q.2 Attempt any **TWO** of the following **(12)**

- a) Define antitranspirants. Give its significance in agriculture.
- b) What is osmosis? Comment on exosmosis and endosmosis with an example.
- c) Explain passive absorption of water and give factors affecting water absorption.

Q.3 Attempt any **TWO** of the following **(12)**

- a) What is photophosphorylation and describe Calvin cycle?
- b) What is glycolysis? Explain TCA cycle and give its regulation.
- c) Comment on biological nitrogen fixation and add note on *nif* gene.

Q.4 Attempt any **THREE** of the following **(12)**

- a) Define growth and explain various phases of growth.
- b) What is seed dormancy? Explain physiology of seed germination.
- c) Give difference between diffusion and osmosis.
- d) What are growth hormones? Comment on practical applications of Auxins and cytokinins.

Q.5 Write short notes on any **FOUR** of the following **(12)**

- a) Give significance of transpiration.
- b) Define vernalization and give its application in agriculture.
- c) Give structure and function of stomata.
- d) Write note on C₄ plants.
- e) Give practical application of Gibberellins.
- f) Distinguish between Long day plant (LDP) and short day plant (SDP)

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